

REMARKS/ARGUMENTS

Claims 1-9 are pending in this application. No claims were amended.

In the Office Action, claims 1-9 were rejected under 35 USC §102(b) as being anticipated by “*TCP-Like Congestion Control for Layered Multicast Data Transfer*” by Vicisano et al. (hereinafter “Vicisano”). Reconsideration in view of the following remarks is respectfully requested.

Independent claim 1 recites, among other features, “logic for reducing the sending rate of at least one of the plurality of layers over time.” In response to Applicant’s argument that Vicisano does not disclose or suggest this element, the Examiner asserted in the Office Action that Vicisano teaches this element, citing to section II.A. of Vicisano, pp. 996-997. The Examiner has apparently impermissibly discounted the limitation of “*over time*” in claim 1 in rejecting the claim or has impermissibly discounted the limitation of “*at least one of the plurality of layers*” in claim 1.

Vicisano discloses multicasting using a number of layers, where each layer has a different bandwidth (i.e., sending rate) (p. 997). Receivers can adjust their reception rate according to network conditions by joining or leaving layers (p. 998), which implies that the receiving rate may change. However, the receiving rate does not change over time for a layer. Instead, all that Vicisano suggests is that, over time, a receiver can join and leave layers to reduce (or increase) the receiver’s reception rate, in response to loss rates or for any other reason.

Vicisano does suggest that a sender can reduce a sending rate according to congestion signals received by a receiver, but that is in the context of unicast communications. See, for example, Vicisano, p. 997, col. 2, section III, second paragraph, which explains how a sender would respond to congestion signals in a unicast communications environment but such congestion signals would be problematic in a multicast communications environment. Elsewhere, Vicisano describes reducing reception rates at a receiver by having the receiver alter its “subscription level” (i.e., the layers it joins). There is no suggestion that the sending rate of a layer is reduced over time. See, for example, Vicisano, p. 997, col. 2, section II.C. last sentence

of second paragraph. In any case, Vicisano does not suggest that a sender would reduce a sending rate for a layer over time.

In the Office Action, at least at the bottom of page 6 and the top of page 7, the Examiner argues that Vicisano teaches the claimed logic for reducing the sending rate of at least one of the plurality of layers over time, arguing that Vicisano teaches that a congestion control algorithm reacts to signals by reducing a transmission rate and a transmission rate corresponds to the claimed sending rate. Even if that were true, it does not anticipate each of the claim elements, as that citation does not disclose or suggest modification of a layer's sending rate.

Similarly, independent claim 3 recites a step of "reducing the sending rates for each of the layers over time." As discussed above, since Vicisano fails to disclose or suggest reducing a sending rate for a layer over time, it necessarily also fails to disclose or suggest reducing the sending rates for each of the layers over time. For at least this reason, Vicisano does not anticipate claim 3.

In view of the above, Applicant submits that claims 1 and 3 are allowable over Vicisano. Claims 2 and 4-7, which depend from claims 1 and 3, respectively, derive patentability therefrom.

Independent claim 8 includes steps of "reducing a sending rate for a first one of the plurality of dynamic layers over time" and "concurrently with the step of reducing, increasing a sending rate of at least one other of the plurality of dynamic layers." As discussed above, Vicisano does not teach or suggest changing the sending rate of any layer over time, much less the changing of the sending rate of any layer and claim 8 is patentable for at least this reason. Claim 9 is patentable at least because it depends from claim 8.

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PATENT

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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